CLAIMS

1. In accordance with the invention there is provided a real time translator comprising:

   (a) a voice receiver;

   (b) a voice to text converter;

   (c) a text-to-text spoken language converter for receiving a first language and translating to a second selected language;

   (d) a text to voice converter for converting the translated second selected language to a voice output; and

   (e) a voice emitter for emitting the voice output;

wherein the real time translator performs as a multilanguage conversation translator having dual voice paths operated by one or more sound cards and software so that conversation from one person in one spoken word language is translated and received by a second person in a second spoken word language at the same time or substantially at the same time as conversation from the second person in the second spoken word language is translated and received by the first person whereby the two persons can undertake a normal conversation in normal time but in different spoken word languages.

2. The translator according to claim 1, which is portable or hand-held or is an earpiece or the like.

3. The translator according to claim 1 which is attached to the telephone system or attached to a personal address system or the like.

4. A real time translator comprising:

   (a) at least one voice receiver;

   (b) at least one voice to text converter;

   (c) at least one text to text spoken language converter for receiving a first selected language text and translating to a second selected language text and/or for receiving the second selected language text and translating to the first selected language text;

   (d) at least one text to voice converter for converting the translated first and/or second selected language to a voice output; and

   (e) at least one voice emitter for emitting the voice outputs.

19

5. The translator according to claim 4 wherein the real time translator includes two sound paths formed by two separate electronic sound manipulators with associated software such that the sound of the first voice in first language being received can be converted to text while the translated text into the second selected language is being converted to voice by the second separate electronic sound manipulator with associated software.

6. The translator according to claim 4 wherein the separate electronic sound manipulators are two personal computer sound cards or the like, or two separate left and right channels of a single personal computer sound card or the like with separate software control.

7. A portable real time translator comprising

(a) first and second voice receivers for receiving first and second selected voice languages;

(b) first and second voice to text converters;

(c) at least one text to text spoken language converter for receiving a first selected language text and translating to a second selected language text and/or for receiving the second selected language text and translating to the first selected language text;

(d) first and second voice converters for converting the translated first and second selected language to first and second voice outputs; and

(e) first and second voice emitters for emitting the voice outputs.

8. The translator according to claim 7 wherein there is an "overlap" in the processing of conversion of first and second voice conversions to or from text and/or with text to text voice language translation such that the lag time between receiving voice and emitting translated voice is within a reasonable conversation period with such period preferably less than one second to a maximum of two seconds.

9. The translator according to claim 8 wherein to simulate conversation the voice translation and emission is in voice phrases substantially corresponding with voice

phrasing of input voice such that a continual flow of spaced voice phrases simulates conversations and preferably such voice phrases are a sentence or part of a sentence.

10. The translator according to claim 7 wherein there is an "overlap" in processing such that a first voice in a first language is received and translated and emitting translated voice simultaneously or apparently simultaneously with receiving a second voice in a second language and translating and emitting second translated voice and preferably by separate processing paths including the separate personal computer sound cards or the like or separate channels on a sound card or the like or by a switching system for switching between two processing paths at a rate to maintain reasonable real time processing of both paths simultaneously.

11. A method of providing real time translation of voices, the method including the steps of:

a) providing first and second voice receivers for receiving first and second selected voice languages;

(b) providing first and second voice emitters associated with the first and second voice receivers respectively for emitting voice outputs;

(c) converting said first and second selected voice languages from said first and second voice receivers to text;

(d) providing a text to text spoken language converter for receiving a first selected language text from said first voice receiver and translating to a second selected language text and/or for receiving the second selected language text and translating to the first selected language text;

(e) providing a voice converter for converting the translated first and second selected language to first and second voice outputs; and

(f) emitting said translated and converted first and second voice outputs;
wherein there is parallel processing of the voice to text conversion and/or text translation and/or the text to voice conversion.

12. The translating method according to claim 11 wherein two sound cards or two channels operating separately on a sound card provide the first and second voice receivers and first and second voice emitters.

21

13. The translating method according to claim 11 wherein processing of the voice to text conversion and/or text translation and/or the text to voice conversion is by a central processing unit (cpu) or the like with software control of the sound card/s and preferably the parallel processing can be by central processing unit (cpu) parallel processing techniques or by software controlled switching techniques

14. The translating method according to claim 11 wherein processing of the voice to text conversion and/or text translation and/or the text to voice conversion is by switching between a speed of a voice phrase of about 2 seconds to the megahertz switching of the central processing unit (cpu).